

REMARKS

The drawings are objected to for failing to comply with 37 CFR § 1.84(p)(5) because FIG. 2 includes the reference number 212, which is not mentioned in the specification. The specification has been amended to include the reference number 212. Accordingly, withdrawal of this objection is respectfully requested.

The specification is objected to because FIG. 3 is not included in the “Brief Description of the Drawings.” The specification has been amended to include a brief description of FIG. 3. Accordingly, withdrawal of this objection is respectfully requested.

Claims 1, 5- 7, 11-14, and 16 have been amended. Claims 4 and 10 have been cancelled. Claims 17-21 were previously canceled. Claims 22-28 have been added. Accordingly, claims 1-3, 5-9, 11-16, and 22-28 are currently pending in this application

Claim 6 and 16 are objected to for failing to comply with 37 CFR § 1.75(a) for failing to particularly point out and distinctly claim the subject matter that Applicants regard as the invention. Specifically, the claim 6 limitations “said first bias source” and “said second bias source” lack antecedent basis. Claim 6 has been amended to correct this informality. With respect to claim 16, the limitation “the columns” lacks sufficient antecedent basis. Claim 16 has been amended to correct this informality. Accordingly, withdrawal of the objections to claims 6 and 16 is respectfully requested.

Claim 10 is also objected to for the same reasons as claims 6 and 16. The Office Action states that claim 10 recites the limitation “said pixels,” lacks antecedent basis. This limitation, however, is contained in claim 13. Applicants, therefore, assume that the objection is to claim 13 and not claim 10. Claim 13 has been amended to correct this informality. Accordingly, withdrawal of the objection to claim 13 is respectfully requested.

Claims 1-13 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Specifically, original claim 1 recites “a select

transistor connected to the photoreceptor,” which is not described in the specification. Claim 1 has been amended to recite “a select transistor connected to said follower transistor.” Additionally, original claim 10 recites “a select transistor connected to said follower transistor,” which is not described in the specification. Claim 10 has been canceled. Accordingly, withdrawal of this rejection is respectfully requested.

Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Accordingly, claim 7 has been rewritten in independent form to include all limitations of the base claim and any intervening claims. Accordingly, the withdrawal of this objection is respectfully requested. Further, claims 11-13 have been amended to depend from rewritten independent claim 7. Accordingly, claims 11-13 are also in a condition for allowance.

Claims 1-3 and 5 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Merrill, US Patent No. 6,211,510 (Merrill ‘510). This rejection is respectfully traversed.

As amended, independent claim 1 recites an image sensor comprising, *inter alia*, “a plurality of pixels, each pixel having . . . a select transistor connected to said follower transistor, and a reset transistor.” Claim 1 further recites that “a gate of said reset transistor of a first pixel is connected to a first reset/select line, and a gate of said select transistor of a second pixel is connected to said first reset/select line.” Merrill ‘510 fails to disclose all limitations of amended independent claim 1, particularly, the above noted limitations.

Merrill ‘510 relates to variable biasing of the readout transistor in an active pixel sensor. Merrill ‘510 at col. 1 lines 10-14. Merrill ‘510 discloses an active pixel sensor having a photodiode 12, a reset transistor 14 and readout transistors 16, 18. Merrill ‘510 at FIG. 3A. Merrill ‘510, however, is silent about any relationship of one active pixel sensor to another. Therefore, Merrill ‘510 does not disclose that “a gate of said reset

transistor of a first pixel is connected to a first reset/select line, and a gate of said select transistor of a second pixel is connected to said first reset/select line,” as recited by amended independent claim 1. For at least these reasons, withdrawal of this rejection is respectfully requested.

Claims 1-4 and 10-12 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Kuroda, US Patent No. 6,512,543 (Kuroda). This rejection is respectfully traversed.

Kuroda relates to a physical quantity distribution sensor. According to Kuroda, the physical quantity distribution sensor can include a plurality of cells arranged in rows and columns. Each cell can include a sensor for sensing a physical quantity, a storage element, and a reset element. Kuroda’s sensor also includes a row selector. Kuroda at col. 2, line 50- col. 3, line 17.

Kuroda, however, fails to disclose all limitations of amended independent claim 1. Like Merrill ‘510, Kuroda fails to disclose that “a gate of said reset transistor of a first pixel is connected to a first reset/select line, and a gate of said select transistor of a second pixel is connected to said first reset/select line.” To the contrary, Kuroda discloses that reset transistors 80 are connected only to the photoelectric conversion section 33 and a power supply line 79 in a first row (e.g., (n+1)th row). Therefore, the gate of Kuroda’s reset transistor is not connected to a reset/select line. Kuroda’s driving transistor 35 and the gate of the selected-row-transistor 42 are both connected to a power supply line in another row (e.g., nth row). For at least these reasons, withdrawal of this rejection is respectfully requested.

Claim 10 has been canceled. Claims 11 and 12 have been amended to depend from claim 7. Accordingly, the rejection of claims 10-12 is moot.

Claims 1, 8, and 9 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Merrill, US Patent No. 5,614,744 (Merrill '744). This rejection is respectfully traversed.

Merrill '744 relates to an active pixel sensor cell to reduce photosensor leakage. Merrill '744 discloses an active pixel sensor cell including a photogate, a reset transistor, a row-selection transistor and a transistor connected to a floating diffusion output node. Merrill '744 at col. 1, line 63- col. 2, line 18; FIG. 1A.

Similarly to Merrill '510, Merrill '744 is silent about any relationship of one active pixel sensor to another. Therefore, Merrill '744 does not disclose that "a gate of said reset transistor of a first pixel is connected to a first reset/select line, and a gate of said select transistor of a second pixel is connected to said first reset/select line," as recited by amended independent claim 1. For at least these reasons, withdrawal of this rejection is respectfully requested.

Claims 14-16 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Okamoto, US Patent No. 6,580,063 (Okamoto). This rejection is respectfully traversed.

Amended independent claim 14 recites an active pixel sensor comprising "an array of pixels, each pixel comprising a photoreceptor, and at least first and second transistors associated with said photoreceptor." Claim 14 further recites that "said first transistor of a first pixel and said second transistor of a second pixel are connected to said first line."

Okamoto relates to a solid state imaging device that uses active pixels. Okamoto discloses a plurality of pixels, each having a photodiode, a reset transistor 802, an amplification transistor 803, and a row selection transistor 804. Okamoto at col. 1, lines 14-36; FIG. 8. According to Okamoto, reset transistors 802 are connected to respective reset lines 806, amplification transistors 803 are connected to respective power supply lines

807, and row selection transistors 804 are connected to respected row selection lines 805. While same transistors of different pixels are connected to a same line (e.g., reset transistors of more than one pixel are connected to a common reset line) different transistors are not connected to a same line (e.g., amplification and row selection transistors are not connected to a reset line). Therefore, Okamoto does not disclose that "said first transistor of a first pixel and said second transistor of a second pixel are connected to said first line," as recited by amended independent claim 14.

Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Merrill '510 in view of Andoh et al., US Patent No. 5,539,461 (Andoh). This rejection is respectfully traversed.

As discussed above, Merrill '510 fails to disclose, teach, or suggest all limitations of amended independent claim 1. Andoh does not supplement the deficiencies of Merrill '510, but is instead cited for purportedly teaching elements of claim 6. Accordingly, for at least the reasons discussed above in connection with the rejection of claims 1-3, and 5 over Merrill '510, withdrawal of this rejection is respectfully requested.

Claim 13 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kuroda in view of Miyawaki et al., US Patent Application Publication No. 2002/0001037 (Miyawaki). Claim 13 has been amended to depend from rewritten independent claim 7. Accordingly, this rejection is moot.

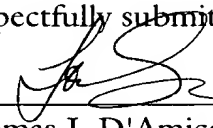
Application No.: 09/653,527
Amendment dated December 28, 2004
Reply to Office action dated October 6, 2004

Docket No.: M4065.0814/P814

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Dated: December 28, 2004

Respectfully submitted,

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